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WQC number: 889-0155A4-WQC-1

Public Notice

Closing Date:
11/20/12

This letter serves as the formal notice of the receipt of an application for a Section 401 Water Quality Certification by the Kentucky Division of Mine Permits (KDMP). The purpose of this notice is to inform the public of active applications awaiting certification under Section 401 of the Clean Water Act (33 U.S.C. § 1341) and to solicit comments and information on any impacts to water quality as it related to the specific project. DMP will evaluate whether the project complies with Kentucky's water quality standards.

The comment period will run for 30 days, as is indicated in the upper portion of this notice. Any person who wishes to comment or receive information pertaining to the pending WQC application, must contact the WQC coordinator at 502 564-2320, or submit comments to: Water Quality Certification 2 Hudson Hollow, Frankfort KY 40601, within the 30 day comment period. All comments will be reviewed and water quality issues will be considered during the review process.

The public may review the detailed Compensatory Mitigation Plan at the Division of Mine Permits office at: #2 Hudson Hollow Frankfort, KY 40601

**Commonwealth of Kentucky
Department for Natural Resources
Division of Mine Permits**

Application for Water Quality Certification for Surface Coal Mining Activities

The Clean Water Act Section 401 Water Quality Certification (WQC) program in Kentucky ensures that activities which may involve a discharge into waters of the Commonwealth which require federal permit or license are consistent with Kentucky's water quality standards in 401 KAR Chapter 5. The Energy and Environment Cabinet has authorized the Department for Natural Resources to issue water quality certifications related to surface coal mining operations. The project may not start until all necessary approvals are obtained. For questions concerning the WQC process, contact the WQC Coordinator at (502)-564-2320.

1. **Applicant Name:** Oxford Mining Company-Kentucky, LLC
Mailing Address: 3060 Cleaton Road
Central City, KY 42330
Contact Person: Sean Jones
Telephone No: (270) 754-2815 ext. 26
E Mail Address: sjones@oxfordresources.com

2. **Consultant Name & Address:** Wetland Services, 3880 Trigg Turner Rd.
Corydon, KY 42406

Telephone No. (270) 454-0900
E Mail Address: rl@wetlandservices.net

3. **Provide a brief description of the proposed activity and stream impact.**
Oxford is proposing to place fill material in waters of the U.S., including wetlands and streams
in order to develop a new surface coal mining operation to recover coal from the BHA4 surface
mine reserve area. Best management practices will be used to aid in sediment control in the
permit area. All mining areas will be returned to approximate original contour. The life of the
mining operation is projected to be 1.1-years. The surface mining will include complete removal
and replacement of surface material, topography, drainage features, and other water bodies.

4. **Project Location Information:**

County Muhlenberg ; **USGS Quadrangle Name** Central City West & East, KY

Nearest Community & Road Intersection: Central City & HWY 62 & Willow Glen Rd

Longitude 37.27509 **Latitude** -87.13050 (Approximate center of the project area)

5. **List the names of all streams affected by the proposed project:**
See attached.

6. For each affected watershed provide the acreage above the toe of the lowest permanent structure.

Watershed 1: 97-acres Watershed 2: 5-acres

7. For each affected stream provide the linear feet of impact, whether the impact is temporary or permanent and indicate if the stream reach is classified as ephemeral, intermittent, or perennial.

See attached.

8. Provide the acreage of wetlands that would be impacted: 5.7-acres

9. Beginning at the nearest intersection of two public roads, provide directions to the project site:

From the West Kentucky Pkwy in Central City, proceed southwest on HWY62. Turn left onto Willow Glen Rd immediately after passing under the West Kentucky Pkwy. Proceed southeast on Willow Glen Rd to the gate entrance of the Briar Hill Mine (N37.26972, W-87.13733). The site can be assessed from this location.

10. Has application been submitted to the U.S. Army Corps of Engineers for this project? Yes ☒ No ☐. If yes, indicate type of application:

NW 12 ☐ NW 14 ☐ NW 21 ☐ NW 27 ☐ NW 49 ☐
NW 50 ☐ Individual ☒

11. Provide the following permit numbers associated with this mining activity:
SMCRA Permit No. 889-0155 Amd 4, KPDES No. KY0105341

12. The following attachments must be provided:

- a. A watershed map showing all ponds and hollowfills to scale with all intermittent, and perennial stream reaches clearly identified.
- b. A 7.5 minute topographic map delineating the proposed project area.
- c. A copy of the complete Compensatory Mitigation Plan

List all other plans and profiles included with this application:

See attached.

I hereby request approval for construction across or along a stream as described in this application and supporting attachments. All of the information provided with this application is true and accurate to the best of my belief and knowledge.

Applicant's Signature:



, Date: 8/20/12

Designed by applicant's agent, attach power of attorney

SUBMIT APPLICATION AND ATTACHMENTS TO:

**WQC COORDINATOR
DIVISION OF MINE PERMITS
#2 HUDSON HOLLOW
FRANKFORT, KENTUCKY 40601**

Project Purpose

Description of Work: The proposed project, which is currently being reviewed by the Kentucky Department of Natural Resources (KDNR) under the Surface Mining Control and Reclamation Act (SMCRA) (KDNR permit #889-0155 Amendment No. 4), would require the placement of fill material into "waters of the United States (U.S.)" located within the Little Cypress Creek watershed, specifically within 12-digit Hydrologic Unit Code (HUC) watershed 051100060401. The total area within the project boundary is approximately 75-acres. This project will recover coal from a surface area of approximately 43-acres located in Muhlenberg County, Kentucky, southwest of Central City. All economically recoverable coal would be removed during the excavation of the area, processed, and sold. The area would be returned to approximate original contours, covered with stockpiled soil material, revegetated, and returned to approved post-mine land use through the SMCRA process.

The raw coal preparation plant has already been built at the adjacent Briar Hill Mine and the coal from AMD4 will be taken there to be processed. Storage yards and other attendant features may also be found there. Haul roads will be constructed in areas that are mined and will adjoin to roads of the adjacent mine. The design requisites for AMD4 include the use of best management practices and proper post-mine reclamation to minimize impacts to the environmental resources.

Water Dependency Determination: The proposed activity is not water dependant. However, multiple project alternatives which included a no action alternative, alternative locations, and alternative methods were considered in determining this proposal as the preferred alternative.

Proposed Work: The proposed excavated area and operation would directly impact 162-ft of intermittent streams and 1,239-ft of ephemeral streams, 0.8-acres of Palustrine forested (PFO) wetland and 4.9-acres of Palustrine emergent (PEM) wetland, and 7.5-acres of open water with 5.5-acres receiving impact as a sediment basin during operation.

Avoidance and Minimization Information: The project footprint has been reduced to minimize impacts to adjacent, potential jurisdictional "waters of the U.S.". Along the southern and western boundaries of the proposed mine site, Oxford has surface and mineral rights to economically recoverable coal reserves where there are existing streams, wetlands, and open waters. Alternatives were considered, however due to the layout of the mine, operational features, the location of the resource, and location of jurisdictional waters, a mining plan that did not discharge dredge or fill material was not achievable. Oxford has however, where possible, chosen to avoid waters to reduce impacts to potential "waters of the U.S.". Total avoidance and minimization consists of approximately 255-ft of intermittent stream, 1,546-ft of perennial stream, 2.3-acres of PFO and 10.8-acres of PEM, and 0.2-acres of open water.

When determining if a surface mining method is practicable for an identified coal reserve, many factors must be considered: the depth of the coal seam(s), the amount of coal reserves, current technology, and market conditions. After evaluating these factors, it was determined that an overburden to coal ratio average of 13.7:1 was the highest economically feasible ratio that would make this operation practicable. There are estimated 900,000-tons of coal within the 75-acre reserve. Of that, Oxford intends to recover 466,900-tons; leaving behind 433,100-tons. Of the 466,900-tons being recovered, 156,400-tons are #10, 123,500-tons are #11, and 187,000-tons are #12. The 433,100-tons are being left in place for a combination of reasons: first, it is deep enough that it surpasses the acceptable stripping ratio; second, the amount of existing waters would make it difficult to mine. Therefore, Oxford determined it would be best to avoid the area altogether, thus minimizing impacts to "waters of the U.S.".

Oxford investigated alternative mining practices for reducing impacts to "waters of the U.S." and will implement the practice of auger mining. However, it will not reduce impacts because the project area is so small and the surface area above the auger mining footprint will be used to construct a diversion ditch and a sediment basin. Ten percent of the coal recovered will be done by auger mining. The remaining ninety percent will be recovered by surface mining. The auger mining will be approximately forty percent efficient.

There are several different methods commonly used in the coal mining industry to recover the coal resource from its natural geologic setting. These methods include: surface mining, auger mining, underground mining, and thin-seam mining. Each of these alternative methods has certain advantages and disadvantages as well as inherent limitations where they can be successfully utilized. Each reserve area is unique in the geologic conditions it presents and these conditions generally limit the alternatives available to the mining operation.

Avoiding and minimizing impacts by mining would consist of the excavation of smaller pits in between aquatic resources. This is not practicable because of the size of the project area as well as the increased operational costs and additional earth handling making the economic viability questionable. It would also reduce the amount of coal produced, slow production, and impair Oxford's ability to meet the project's need. Some of the aquatic resources proposed to be impacted may be avoided directly, however hydrologic changes caused by the surrounding mining would indirectly affect them due to their location throughout the site. Some potential indirect effects would be dewatering via ground water interactions removed by open adjacent highwalls, loss of surface water interactions as all surface waters would be diverted away from avoided streams and wetlands to meet water quality standards. Additionally, this would fragment the reclamation landscape. This fragmentation may result in connectivity issues with the aquatic resources between the reclaimed landscape and the unmined areas which would impact the functions and values of the avoided areas. This alternative is not environmentally preferable due to the inability to solve all hydrologic and ecological connectivity issues.

Compensatory Mitigation: For the unavoidable impacts, Oxford has proposed to restore and enhance 782-ft of perennial stream on the project site as soon as ACOE authorizes the permit. Existing streams were assessed utilizing the Environmental Protection Agency's (EPA) Rapid Bio-assessment Protocol (RBP II) for wadeable and headwater streams, and a macroinvertebrate Index of Biotic Integrity (MBI) developed by the Kentucky Division of Water's (KYDOW) Standard Operating Procedures for collecting macroinvertebrates in headwater and wadeable streams. These assessments are to be compared to the enhanced stream after construction and monitoring is complete in order to assess the functionality of the enhanced stream. The proposed stream enhancement would replace low quality Rosgen A, B, and G-type streams with a perennial Rosgen C-channel that would score in the suboptimal range utilizing the RBP method as in the pre-impact assessment. The enhanced perennial would be considered an ecological lift in primary function as compared to the existing streams. These functions include aquatic habitat and movement, water conveyance, sediment transport, water sources for terrestrial animals, and supporting the food web by organic material contribution. Natural channel design methods would be used to restore the mitigation stream. A riparian buffer consisting of native trees and shrubs would be planted along either side of the stream where native trees are not currently present. The width of the buffer will be 75-ft per side. Rosgen C-type streams include log vanes, J-hooks, pools, root wads, and/or cross vane structures to stabilize the channels, lower velocities, and create varied habitats in the form of riffles, runs, and pools.

Oxford will mitigate unavoidable impacts to wetlands by restoring and enhancing a total of 10.9-acres of wetlands. Wetland mitigation would begin on site as soon as ACOE authorizes the permit. This includes 2.4-acres of PFO wetland restoration and 8.5-acres of PEM wetland enhancement. Wetland restoration and enhancement would occur on-site adjacent to the stream enhancement. The wetland mitigation site is currently infested by *Phragmites australis*. The wetlands would obtain hydrology from groundwater, precipitation, and overbank flooding from the adjacent perennial stream mitigation. The wetlands would be planted with a variety of hard mast producing hardwood tree species as well as an herbaceous mix. PFO wetland impacts would be mitigated at a ratio of 3:1 and PEM wetlands would be mitigated at a ratio of 1.7:1.

During monitoring, Oxford will utilize the Rosgen Classification of Natural Rivers methodology, the U.S. EPA RBP II for wadeable and headwater streams, and MBI to assess the mitigation stream and compare them to the impacted waters.

Existing Conditions: The area of this project drains to Little Cypress Creek which is in the Little Cypress Creek Watershed. The property is located on 75-acres in Muhlenberg County Kentucky, south of Central City and the Western Kentucky Parkway.

The existing streams on-site were classified and evaluated utilizing the RBP methodology. The average overall scores by flow regime were: ephemeral – 92, intermittent – 88, and perennial – 104. There were four ephemeral streams, two intermittent, and two perennial streams assessed. Both existing ephemeral and intermittent streams would fall under the marginal category, with one perennial being marginal and the other sub-optimal.

The area of this project is located on unnamed tributaries of Little Cypress Creek in the Little Cypress Creek Watershed. The Little Cypress Creek Watershed has been extensively impacted by logging, agriculture, and mining. Development type impacts also exist in the watershed and include industrial, commercial, residential, and transportation. These various impacts have contributed to Little Cypress Creek to be on the 303d list of impaired streams. The Little Cypress Creek Watershed is a twelve digit (051100060401) HUC watershed located in central western Kentucky (see HUC Map). The watershed encompasses approximately 15,564 acres in Muhlenberg County. Approximately half (50.2%) of the watershed is classified as forest. Development, grassland, and agriculture are nearly equal each comprising about 14% of the watershed.

There are four (4) ephemeral streams, two (2) intermittent streams, and two (2) perennial streams located within the JD Boundary. All assessed streams were identified. One perennial and one intermittent stream are unnamed tributaries to Little Cypress Creek.

Eight (8) wetlands were identified within the JD Boundary. The total cumulative wetland area was 18.8-acres. Nearly 70% of the wetlands are being avoided or minimized due to a reduction in the mining operation.

Five (5) open waters were found on-site. Nearly all will receive some impact. The majority of impact (5.5-acres) comes from 1RO1 that will be utilized as a sediment basin during mine operation.

ALTERNATIVES ANALYSIS

Criteria: The following tables illustrate the impacts to jurisdictional "Waters of the U.S."

Issue	Measurement and/or Constraint
Wetlands	5.7-acres of direct impact
Intermittent Streams	162-ft of direct impact
Ephemeral Streams	1,239-ft of direct impact
Open Waters	7.5-acres of direct impact

The following tables illustrate impacts or avoidance to jurisdictional "Waters of the U.S." by waters type, individual resource segment, size of the resource segment, size of impact to the resource segment, and the specific type of constraint.

Stream	Total Length	Impact	Constraint
1MS1	313	0	Avoidance
1RS1-1	1233	0	Avoidance
1MS1B	382	382	Direct – Diversion and Open Mining
2MS1	162	162	Direct – Diversion
1RS1A	255	0	Avoidance
2MS1A	206	206	Direct – Diversion and Sediment Pond
2MS1A-1	327	327	Direct – Open Mining
1MS1B-1	324	324	Direct – Open Mining

Wetland	Total Acres	Impact	Constraint
PFO	3.1	0.8	Direct – Diversion and Open Mining
PEM	15.7	4.9	Direct – Diversion and Open Mining

Open Water	Total Acres	Impact	Constraint
Pond	7.7	7.5	Direct – Sediment Pond and Open Mining